AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1 to 12. (Canceled).

13. (New) A method for effecting a computer-aided estimation of a mass of a vehicle, comprising:

computer-aided differentiating an equilibrium relationship, between a motive force and a sum of an inertial force and drive resistances, in which the mass and a gradient angle of a roadway are included as quantities, with respect to time, assuming a constant gradient angle; and

calculating at least one of (a) the mass of the vehicle and (b) a reciprocal value of the mass of the vehicle from the equilibrium relationship differentiated with respect to time in the differentiating step.

14. (New) The method according to claim 13, wherein the vehicle includes a commercial vehicle.

15. (New) The method according to claim 13, wherein the drive resistances include a sum of one of (a) an accelerative force and (b) a deceleration force as a function of the mass and one of (a) an uphill force and (b) a downhill force as a function of the gradient angle.

16. (New) The method according to claim 15, wherein the mass is calculated from the equation:

$$m = \frac{dF/dt}{da/dt}$$

wherein a represents a time derivation of a longitudinal vehicle velocity and F represents the motive force of the vehicle.

17. (New) The method according to claim 16, further comprising determining, from measured quantities, the motive force and the one of (a) the acceleration and (b) the deceleration.

18. (New) The method according to claim 17, wherein the measured quantities are available in a control unit of the vehicle.

19. (New) The method according to claim 18, further comprising filtering the measured quantities as a function of a signal quality.

20. (New) The method according to claim 17, further comprising:
repeatedly measuring the measured quantities; and
weighting the measurements differently.

21. (New) The method according to claim 13, wherein the computer-aided differentiating is performed continuously and recursively.

22. (New) The method according to claim 21, wherein the computer-aided differentiating is performed one of (a) according to a two-point differentiation and (b) with a state-variable filter.

23. (New) The method according to claim 13, wherein the calculating step includes calculating both the mass and the reciprocal value of the mass, the method further comprising forming a weighted average value.

24. (New) A device for effecting a computer-aided estimation of a mass of a vehicle, comprising:
a calculation unit adapted to calculate at least one of (a) the mass of the vehicle and (b) a reciprocal value of the mass of the vehicle from an equilibrium relationship between a motive force and a sum of an inertial force and drive resistances, the mass and a gradient angle of a roadway included as calculation quantities, after a computer-aided differentiation of the equilibrium relationship with respect to time, assuming a constant gradient angle.

25. (New) The device according to claim 24, wherein the vehicle includes a commercial vehicle.

26. (New) The device according to claim 24, wherein the calculation unit is integrating into a control unit of the vehicle.